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NEWS 18	Aug 08	NTIS has been reloaded and enhanced
NEWS 19	Aug 09	JAPIO to be reloaded August 18, 2002

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=> s subunits and mixing and species and enzyme?
L1          52 SUBUNITS AND MIXING AND SPECIES AND ENZYME?

=> duplicate remove l1
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L2          25 DUPLICATE REMOVE L1 (27 DUPLICATES REMOVED)

=> d l2 1-10

L2   ANSWER 1 OF 25  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN   2001:245159  BIOSIS
DN   PREV200100245159
TI   Three  ***subunits***  contribute critical amino acids to the active
     site of tetrameric adenylosuccinate lyase.
AU   Brosius, Jennifer L. (1); Crocco, Jennifer M. (1); Colman, Roberta F. (1)
CS   (1) University of Delaware, Newark, DE, 19716 USA
SO   FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A187. print.
     Meeting Info.: Annual Meeting of the Federation of American Societies for
     Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA
     March 31-April 04, 2001
     ISSN: 0892-6638.
DT   Conference
LA   English
SL   English

L2   ANSWER 2 OF 25  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     1
AN   2000:113234  BIOSIS
DN   PREV200000113234
TI   Cloning, expression, and purification of a thermostable nonhomodimeric
     restriction  ***enzyme***  , BslI.
AU   Hsieh, Pei-Chung; Xiao, Jian-Ping; O'Loane, Diana; Xu, Shuang-Yong (1)
```

CS (1) New England Biolabs, Inc., 32 Tozer Rd., Beverly, MA, 01915-5510 USA
SO Journal of Bacteriology, (Feb., 2000) Vol. 182, No. 4, pp. 949-955.
ISSN: 0021-9193.
DT Article
LA English
SL English

L2 ANSWER 3 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 1999:172918 BIOSIS
DN PREV199900172918
TI Self-glucosylation of glycogenin, the initiator of glycogen biosynthesis, involves an inter-subunit reaction.
AU Lin, Amy; Mu, James; Yang, Jie; Roach, Peter J. (1)
CS (1) Dep. Biochem. and Mol. Biol., Indiana Univ. Sch. Med., Indianapolis, IN 46202-5122 USA
SO Archives of Biochemistry and Biophysics, (March 1, 1999) Vol. 363, No. 1, pp. 163-170.
ISSN: 0003-9861.
DT Article
LA English

L2 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3
AN 1998:557881 CAPLUS
DN 129:256880
TI Kinetic evidence that a radical transfer pathway in protein R2 of mouse ribonucleotide reductase is involved in generation of the tyrosyl free radical
AU Schmidt, Peter Paul; Rova, Ulrika; Katterle, Bettina; Thelander, Lars; Graslund, Astrid
CS Department of Biophysics, Stockholm University, Stockholm, S-106 91, Swed.
SO Journal of Biological Chemistry (1998), 273(34), 21463-21472
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English

L2 ANSWER 5 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
AN 1998:233640 BIOSIS
DN PREV199800233640
TI Involvement of two aspartate residues of Rubisco activase in coordination of the ATP gamma-phosphate and subunit cooperativity.
AU van De Loo, Frank J.; Salvucci, Michael E. (1)
CS (1) USDA-ARS, Western Cotton Res. Lab., 4135 E. Broadway Road, Phoenix, AZ 85040-8830 USA
SO Biochemistry, (March 31, 1998) Vol. 37, No. 13, pp. 4621-4625.
ISSN: 0006-2960.
DT Article
LA English

L2 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 5
AN 1997:751439 CAPLUS
DN 128:47062
TI Functional properties of the separate ***subunits*** of human DNA helicase II/Ku autoantigen
AU Ochem, Alexander E.; Shopac, Doris; Costa, Mario; Rabilloud, Thierry;

Vuillard, Laurent; Simoncsits, Andras; Giacca, Mauro; Falaschi, Arturo
CS Molecular Biology Unit, International Centre for Genetic Engineering and Biotechnology, Trieste, 34012, Italy
SO Journal of Biological Chemistry (1997), 272(47), 29919-29926
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English

L2 ANSWER 7 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:167333 BIOSIS
DN PREV199900167333
TI Verification of glaucocystophyta from an aspect of membrane evolution theory.
AU Nakamura, Hakobu (1)
CS (1) Dep. Biol., Fac. Sci., Konan Univ., 8-9-1 Okamoto, Higashinada-ku, Kobe 658 Japan
SO Memoirs of the Konan University Science Series, (1997) Vol. 44, No. 2, pp. 27-33.
ISSN: 0452-4160.
DT Article
LA English

L2 ANSWER 8 OF 25 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 97002113 EMBASE
DN 1997002113
TI Direct evidence for the localization of the steroid-binding site of the plasma sex steroid-binding protein (SBP or SHBG) at the interface between the ***subunits*** .
AU Sui L.-M.; Hughes W.; Hoppe A.J.; Petra P.H.
CS P.H. Petra, Department of Biochemistry, University of Washington, Seattle, WA 98195, United States
SO Protein Science, (1996) 5/12 (2514-2520).
ISSN: 0961-8368 CODEN: PRCIEI
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L2 ANSWER 9 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6
AN 1995:62083 BIOSIS
DN PREV199598076383
TI Formation of functional cross- ***species*** heterodimers of ornithine decarboxylase.
AU Osterman, Andrei; Grishin, Nick V.; Kinch, Lisa N.; Phillips, Margaret A. (1)
CS (1) Dep. Pharmacology, Univ. Texas Southwestern Med. Cent., Dallas, TX 75235 USA
SO Biochemistry, (1994) Vol. 33, No. 46, pp. 13662-13667.
ISSN: 0006-2960.
DT Article
LA English

L2 ANSWER 10 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7

AN 1994:491929 BIOSIS
DN PREV199497504929
TI Aluminum fluoride activation of bovine transducin induces two distinct conformational changes in the alpha subunit.
AU Mittal, Rohit; Cerione, Richard A.; Erickson, Jon W. (1)
CS (1) Dep. Pharmacol., Schurman Hall, Cornell University, Ithaca, NY 14853-6401 USA
SO Biochemistry, (1994) Vol. 33, No. 33, pp. 10178-10184.
ISSN: 0006-2960.
DT Article
LA English

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FULL ESTIMATED COST	0.06	24.88

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=> s l1 and non(w)functional
L3 0 L1 AND NON(W) FUNCTIONAL

=> s l1 and diminished
L4 0 L1 AND DIMINISHED

=> s l1 and non(w)active
L5 0 L1 AND NON(W) ACTIVE

=> s l1 and inactive
L6 12 L1 AND INACTIVE

=> s l1 and loss(w)of(w)activity

L7 0 L1 AND LOSS(W) OF(W) ACTIVITY

=> s l1 and loss(w)of(w)specific(w)activity
L8 0 L1 AND LOSS(W) OF(W) SPECIFIC(W) ACTIVITY

=> d l6 1-12

L6 ANSWER 1 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:245159 BIOSIS
DN PREV200100245159
TI Three ***subunits*** contribute critical amino acids to the active site of tetrameric adenylosuccinate lyase.
AU Brosius, Jennifer L. (1); Crocco, Jennifer M. (1); Colman, Roberta F. (1)
CS (1) University of Delaware, Newark, DE, 19716 USA
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A187. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638.
DT Conference
LA English
SL English

L6 ANSWER 2 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1995:62083 BIOSIS
DN PREV199598076383
TI Formation of functional cross- ***species*** heterodimers of ornithine decarboxylase.
AU Osterman, Andrei; Grishin, Nick V.; Kinch, Lisa N.; Phillips, Margaret A. (1)
CS (1) Dep. Pharmacology, Univ. Texas Southwestern Med. Cent., Dallas, TX 75235 USA
SO Biochemistry, (1994) Vol. 33, No. 46, pp. 13662-13667.
ISSN: 0006-2960.
DT Article
LA English

L6 ANSWER 3 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:347189 BIOSIS
DN PREV199396044189
TI Refolding of luciferase ***subunits*** from urea and assembly of the active heterodimer: Evidence for folding intermediates that precede and follow the dimerization step on the pathway to the active form of the ***enzyme*** .
AU Ziegler, Miriam M.; Goldberg, Michel E.; Chaffotte, Alain F.; Baldwin, Thomas O. (1)
CS (1) Dep. Biochem. Biophysics, Texas A and M University, College Station, TX 77843 USA
SO Journal of Biological Chemistry, (1993) Vol. 268, No. 15, pp. 10760-10765.
ISSN: 0021-9258.
DT Article
LA English

L6 ANSWER 4 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:347188 BIOSIS
DN PREV199396044188
TI Contribution of folding steps involving the individual ***subunits***

of bacterial luciferase to the assembly of the active heterodimeric ***enzyme*** .

AU Baldwin, Thomas O. (1); Ziegler, Miriam M.; Chaffotte, Alain F.; Goldberg, Michel E.

CS (1) Dep. Biochem. Biophysics, Texas A and M University, College Station, TX 77843 USA

SO Journal of Biological Chemistry, (1993) Vol. 268, No. 15, pp. 10766-10772. ISSN: 0021-9258.

DT Article

LA English

L6 ANSWER 5 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1981:280944 BIOSIS

DN BA72:65928

TI SUBUNIT INTERACTIONS IN GAMMA GLUTAMYL TRANS PEPTIDASE RECONSTITUTION OF THE ACTIVE ***SPECIES*** FROM ISOLATED ***SUBUNITS*** .

AU GARDELL S J; TATE S S

CS DEP. BIOCHEM., CORNELL UNIV. MED. COLL., NEW YORK, N.Y. 10021.

SO J BIOL CHEM, (1981) 256 (10), 4799-4804. CODEN: JBCHA3. ISSN: 0021-9258.

FS BA; OLD

LA English

L6 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2002 ACS

AN 1994:675198 CAPLUS

DN 121:275198

TI Formation of Functional Cross- ***Species*** Heterodimers of Ornithine Decarboxylase

AU Osterman, Andrei; Grishin, Nick V.; Kinch, Lisa N.; Phillips, Margaret A.

CS Southwestern Medical Center, University of Texas, Dallas, TX, 75230, USA

SO Biochemistry (1994), 33(46), 13662-7 CODEN: BICHAW; ISSN: 0006-2960

DT Journal

LA English

L6 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2002 ACS

AN 1993:466524 CAPLUS

DN 119:66524

TI Refolding of luciferase ***subunits*** from urea and assembly of the active heterodimer. Evidence for folding intermediates that precede and follow the dimerization step on the pathway to the active form of the ***enzyme***

AU Ziegler, Miriam M.; Goldberg, Michel E.; Chaffotte, Alain F.; Baldwin, Thomas O.

CS Inst. Biosci. Technol., Texas A and M Univ., College Station, TX, 77843, USA

SO J. Biol. Chem. (1993), 268(15), 10760-5 CODEN: JBCHA3; ISSN: 0021-9258

DT Journal

LA English

L6 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2002 ACS

AN 1993:423663 CAPLUS

DN 119:23663

TI Contribution of folding steps involving the individual ***subunits*** of bacterial luciferase to the assembly of the active heterodimeric ***enzyme***

AU Baldwin, Thomas O.; Ziegler, Miriam M.; Chaffotte, Alain F.; Goldberg, Michel E.
CS Inst. Biosci. Technol., Texas A and M Univ., College Station, TX, 77843, USA
SO J. Biol. Chem. (1993), 268(15), 10766-72
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L6 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2002 ACS
AN 1981:420459 CAPLUS
DN 95:20459
TI Subunit interactions in .gamma.-glutamyl transpeptidase. Reconstitution of the active ***species*** from isolated ***subunits***
AU Gardell, Stephen J.; Tate, Suresh S.
CS Med. Coll., Cornell Univ., New York, NY, 10021, USA
SO J. Biol. Chem. (1981), 256(10), 4799-804
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L6 ANSWER 10 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 94371842 EMBASE
DN 1994371842
TI Formation of functional cross- ***species*** heterodimers of ornithine decarboxylase.
AU Osterman A.; Grishin N.V.; Kinch L.N.; Phillips M.A.
CS Department of Pharmacology, Texas Univ. SW Medical Center,Dallas, TX 75235, United States
SO Biochemistry, (1994) 33/46 (13662-13667).
ISSN: 0006-2960 CODEN: BICHAW
CY United States
DT Journal; Article
FS 004 Microbiology
029 Clinical Biochemistry
LA English
SL English

L6 ANSWER 11 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 93162266 EMBASE
DN 1993162266
TI Contribution of folding steps involving the individual ***subunits*** of bacterial luciferase to the assembly of the active heterodimeric ***enzyme*** .
AU Baldwin T.O.; Ziegler M.M.; Chaffotte A.F.; Goldberg M.E.
CS Dept. of Biochemistry and Biophysics, Texas A and M University,College Station, TX 77843, United States
SO Journal of Biological Chemistry, (1993) 268/15 (10766-10772).
ISSN: 0021-9258 CODEN: JBCHA3
CY United States
DT Journal; Article
FS 004 Microbiology
029 Clinical Biochemistry
LA English
SL English

L6 ANSWER 12 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AN 93162265 EMBASE
DN 1993162265
TI Refolding of luciferase ***subunits*** from urea and assembly of the active heterodimer. Evidence for folding intermediates that precede and follow the dimerization step on the pathway to the active form of the ***enzyme*** .
AU Ziegler M.M.; Goldberg M.E.; Chaffotte A.F.; Baldwin T.O.
CS Dept. of Biochemistry and Biophysics, Texas A and M University,College Station, TX 77843, United States
SO Journal of Biological Chemistry, (1993) 268/15 (10760-10765).
ISSN: 0021-9258 CODEN: JBCHA3
CY United States
DT Journal; Article
FS 004 Microbiology
029 Clinical Biochemistry
LA English
SL English

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COST IN U.S. DOLLARS

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FULL ESTIMATED COST	44.05	68.93

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=> d l6 10 ab
YOU HAVE REQUESTED DATA FROM FILE 'BIOSIS, CAPLUS, EMBASE' - CONTINUE? (Y)/N:y

L6 ANSWER 10 OF 12 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AB The two active sites in ornithine decarboxylase (ODC) are formed at the dimer interface with Lys-69 and Cys-360 contributing to each active site from opposite monomers [Tobias, K. E., and Kahana, C. (1993) Biochemistry 32, 5842-5847]. To gain insight into the organization of the substrate binding site and the nature of the dimer interface, analysis of ornithine decarboxylase from two parasitic protozoa, Trypanosoma brucei and Leishmania donovani, and from mouse was undertaken. Though T. brucei and mouse ornithine decarboxylase share only 60% sequence identity, the cross- ***species*** heterodimers form spontaneously, as measured by the restoration of ***enzyme*** activity upon ***mixing*** ***inactive*** K69A and C360A mutant ***enzymes*** . Thus, the amino acid composition of the dimer interface is apparently highly conserved between the T. brucei and mouse ***enzymes*** . Cross- ***species*** heterodimers were not formed between either T. brucei or mouse ODC and L. donovani ODC. Unlike the mouse and T. brucei ODC, the ***subunits*** of L. donovani ODC are not in rapid equilibrium, and incubation with a denaturant is required to induce reassociation. Kinetic analysis of the wild-type mouse and parasite ODCs revealed differences in the substrate binding sites between the three ***enzymes*** . The substrate binding

properties of the restored active site in the T. brucei:mouse cross-***species*** heterodimer mimic the characteristics of the wild-type ***enzyme*** from the ***species*** which contributes the subunit with a functional Lys-69.

<------User Break------>

=> d l1 1-15
YOU HAVE REQUESTED DATA FROM FILE 'BIOSIS, CAPLUS, EMBASE' - CONTINUE? (Y)/N:y

L1 ANSWER 1 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:245159 BIOSIS
DN PREV200100245159
TI Three ***subunits*** contribute critical amino acids to the active site of tetrameric adenylosuccinate lyase.
AU Brosius, Jennifer L. (1); Crocco, Jennifer M. (1); Colman, Roberta F. (1)
CS (1) University of Delaware, Newark, DE, 19716 USA
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A187. print.
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ISSN: 0892-6638.
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LA English
SL English

L1 ANSWER 2 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:113234 BIOSIS
DN PREV200000113234
TI Cloning, expression, and purification of a thermostable nonhomodimeric restriction ***enzyme*** , BslI.
AU Hsieh, Pei-Chung; Xiao, Jian-Ping; O'Loane, Diana; Xu, Shuang-Yong (1)
CS (1) New England Biolabs, Inc., 32 Tozer Rd., Beverly, MA, 01915-5510 USA
SO Journal of Bacteriology, (Feb., 2000) Vol. 182, No. 4, pp. 949-955.
ISSN: 0021-9193.
DT Article
LA English
SL English

L1 ANSWER 3 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:172918 BIOSIS
DN PREV199900172918
TI Self-glucosylation of glycogenin, the initiator of glycogen biosynthesis, involves an inter-subunit reaction.
AU Lin, Amy; Mu, James; Yang, Jie; Roach, Peter J. (1)
CS (1) Dep. Biochem. and Mol. Biol., Indiana Univ. Sch. Med., Indianapolis, IN 46202-5122 USA
SO Archives of Biochemistry and Biophysics, (March 1, 1999) Vol. 363, No. 1, pp. 163-170.
ISSN: 0003-9861.
DT Article
LA English

L1 ANSWER 4 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 1999:167333 BIOSIS
DN PREV199900167333
TI Verification of glaucocystophyta from an aspect of membrane evolution theory.
AU Nakamura, Hakobu (1)
CS (1) Dep. Biol., Fac. Sci., Konan Univ., 8-9-1 Okamoto, Higashinada-ku, Kobe 658 Japan
SO Memoirs of the Konan University Science Series, (1997) Vol. 44, No. 2, pp. 27-33.
ISSN: 0452-4160.
DT Article
LA English

L1 ANSWER 5 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:233640 BIOSIS
DN PREV199800233640
TI Involvement of two aspartate residues of Rubisco activase in coordination of the ATP gamma-phosphate and subunit cooperativity.
AU van De Loo, Frank J.; Salvucci, Michael E. (1)
CS (1) USDA-ARS, Western Cotton Res. Lab., 4135 E. Broadway Road, Phoenix, AZ 85040-8830 USA
SO Biochemistry, (March 31, 1998) Vol. 37, No. 13, pp. 4621-4625.
ISSN: 0006-2960.
DT Article
LA English

L1 ANSWER 6 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1995:62083 BIOSIS
DN PREV199598076383
TI Formation of functional cross- ***species*** heterodimers of ornithine decarboxylase.
AU Osterman, Andrei; Grishin, Nick V.; Kinch, Lisa N.; Phillips, Margaret A. (1)
CS (1) Dep. Pharmacology, Univ. Texas Southwestern Med. Cent., Dallas, TX 75235 USA
SO Biochemistry, (1994) Vol. 33, No. 46, pp. 13662-13667.
ISSN: 0006-2960.
DT Article
LA English

L1 ANSWER 7 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:491929 BIOSIS
DN PREV199497504929
TI Aluminum fluoride activation of bovine transducin induces two distinct conformational changes in the alpha subunit.
AU Mittal, Rohit; Cerione, Richard A.; Erickson, Jon W. (1)
CS (1) Dep. Pharmacol., Schurman Hall, Cornell University, Ithaca, NY 14853-6401 USA
SO Biochemistry, (1994) Vol. 33, No. 33, pp. 10178-10184.
ISSN: 0006-2960.
DT Article
LA English

L1 ANSWER 8 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:347189 BIOSIS
DN PREV199396044189
TI Refolding of luciferase ***subunits*** from urea and assembly of the

active heterodimer: Evidence for folding intermediates that precede and follow the dimerization step on the pathway to the active form of the ***enzyme*** .
AU Ziegler, Miriam M.; Goldberg, Michel E.; Chaffotte, Alain F.; Baldwin, Thomas O. (1)
CS (1) Dep. Biochem. Biophysics, Texas A and M University, College Station, TX 77843 USA
SO Journal of Biological Chemistry, (1993) Vol. 268, No. 15, pp. 10760-10765. ISSN: 0021-9258.
DT Article
LA English

L1 ANSWER 9 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:347188 BIOSIS
DN PREV199396044188
TI Contribution of folding steps involving the individual ***subunits*** of bacterial luciferase to the assembly of the active heterodimeric ***enzyme*** .
AU Baldwin, Thomas O. (1); Ziegler, Miriam M.; Chaffotte, Alain F.; Goldberg, Michel E.
CS (1) Dep. Biochem. Biophysics, Texas A and M University, College Station, TX 77843 USA
SO Journal of Biological Chemistry, (1993) Vol. 268, No. 15, pp. 10766-10772. ISSN: 0021-9258.
DT Article
LA English

L1 ANSWER 10 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:347161 BIOSIS
DN PREV199396044161
TI Purified native ***subunits*** of bacterial luciferase are active in the bioluminescence reaction but fail to assemble into the alpha-beta structure.
AU Sinclair, James F.; Waddle, Jenny J.; Waddill, E. Florence; Baldwin, Thomas O. (1)
CS (1) Dep. Biochem. Biophysics, Texas A and M Univ., College Station, TX 77843 USA
SO Biochemistry, (1993) Vol. 32, No. 19, pp. 5036-5044. ISSN: 0006-2960.
DT Article
LA English

L1 ANSWER 11 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1991:369069 BIOSIS
DN BA92:57294
TI ROLE OF THE TETRAMERIC STRUCTURE OF ESCHERICHIA-COLI PYRUVATE OXIDASE IN ***ENZYME*** ACTIVATION AND LIPID BINDING.
AU WANG A-Y; CHANG Y-Y; CRONAN J E JR
CS DEP. MICROBIOLOGY BIOCHEM., UNIVERSITY ILLINOIS, URBANA, ILL. 61801.
SO J BIOL CHEM, (1991) 266 (17), 10959-10966. CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English

L1 ANSWER 12 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1988:159629 BIOSIS
DN BA85:83282

TI SUBUNIT STRUCTURE OF A YEAST SITE-SPECIFIC ENDODEOXYRIBONUCLEASE ENDO-SCE-I A STUDY USING MONOCLONAL ANTIBODIES.
AU NAKAGAWA K-I; HASHIKAWA J-I; MAKINO O; ANDO T; SHIBATA T
CS LAB. MICROBIOL., RIKEN INST., WAKO-SHI, SAITAMA, JAPAN 351-01.
SO EUR J BIOCHEM, (1988) 171 (1-2), 23-30.
CODEN: EJBCAI. ISSN: 0014-2956.
FS BA; OLD
LA English

L1 ANSWER 13 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1985:305484 BIOSIS
DN BA79:85480
TI 4 AMINOBUTYRATE AMINOTRANSFERASE REACTION OF SULFHYDRYL RESIDUES CONNECTED WITH CATALYTIC ACTIVITY.
AU CHOI S Y; CHURCHICH J E
CS DEP. BIOCHEM., UNIV. TENN., KNOXVILLE, TENN. 37996-0840.
SO J BIOL CHEM, (1985) 260 (2), 993-997.
CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English

L1 ANSWER 14 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC. .
AN 1981:280944 BIOSIS
DN BA72:65928
TI SUBUNIT INTERACTIONS IN GAMMA GLUTAMYL TRANS PEPTIDASE RECONSTITUTION OF THE ACTIVE ***SPECIES*** FROM ISOLATED ***SUBUNITS*** .
AU GARDELL S J; TATE S S
CS DEP. BIOCHEM., CORNELL UNIV. MED. COLL., NEW YORK, N.Y. 10021.
SO J BIOL CHEM, (1981) 256 (10), 4799-4804.
CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English

L1 ANSWER 15 OF 52 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1978:185954 BIOSIS
DN BA65:72954
TI A SIMPLE METHOD FOR THE IDENTIFICATION OF ALTERED ***SUBUNITS*** IN MUTANT RNA POLYMERASES OF ESCHERICHIA-COLI.
AU SUGIURA M; ITO N; SUZUKI M
CS NATL. INST. GENET., MISHIMA, SHIZUOKA 411, JPN.
SO ANAL BIOCHEM, (1978) 84 (1), 337-339.
CODEN: ANBCA2. ISSN: 0003-2697.
FS BA; OLD
LA English

=> d l1 16-25
YOU HAVE REQUESTED DATA FROM FILE 'BIOSIS, CAPLUS, EMBASE' - CONTINUE? (Y)/N:y

L1 ANSWER 16 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 2000:101941 CAPLUS
DN 132:218828
TI Cloning, expression, and purification of a thermostable nonhomodimeric restriction ***enzyme*** , BslI
AU Hsieh, Pei-Chung; Xiao, Jian-Ping; O'Loane, Diana; Xu, Shuang-Yong

CS New England Biolabs, Inc., Beverly, MA, 01915-5510, USA
SO Journal of Bacteriology (2000), 182(4), 949-955
CODEN: JOBAAY; ISSN: 0021-9193
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 17 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1999:134078 CAPLUS
DN 130:322023
TI Self-glucosylation of glycogenin, the initiator of glycogen biosynthesis, involves an inter-subunit reaction
AU Lin, Amy; Mu, James; Yang, Jie; Roach, Peter J.
CS Department of Biochemistry and Molecular Biology, Indiana University School of Medicine, Indianapolis, IN, 46202-5122, USA
SO Archives of Biochemistry and Biophysics (1999), 363(1), 163-170
CODEN: ABBIA4; ISSN: 0003-9861
PB Academic Press
DT Journal
LA English
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 18 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1998:557881 CAPLUS
DN 129:256880
TI Kinetic evidence that a radical transfer pathway in protein R2 of mouse ribonucleotide reductase is involved in generation of the tyrosyl free radical
AU Schmidt, Peter Paul; Rova, Ulrika; Katterle, Bettina; Thelander, Lars; Graslund, Astrid
CS Department of Biophysics, Stockholm University, Stockholm, S-106 91, Swed.
SO Journal of Biological Chemistry (1998), 273(34), 21463-21472
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English

L1 ANSWER 19 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1998:161362 CAPLUS
DN 128:292048
TI Involvement of Two Aspartate Residues of Rubisco Activase in Coordination of the ATP .gamma.-Phosphate and Subunit Cooperativity
AU van de Loo, Frank J.; Salvucci, Michael E.
CS Agricultural Research Service Western Cotton Research Laboratory, United States Department of Agriculture, Phoenix, AZ, 85040-8830, USA
SO Biochemistry (1998), 37(13), 4621-4625
CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English

L1 ANSWER 20 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1997:751439 CAPLUS
DN 128:47062

TI Functional properties of the separate ***subunits*** of human DNA helicase II/Ku autoantigen
AU Ochem, Alexander E.; Shopac, Doris; Costa, Mario; Rabilloud, Thierry; Vuillard, Laurent; Simoncsits, Andras; Giacca, Mauro; Falaschi, Arturo
CS Molecular Biology Unit, International Centre for Genetic Engineering and Biotechnology, Trieste, 34012, Italy
SO Journal of Biological Chemistry (1997), 272(47), 29919-29926
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English

L1 ANSWER 21 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1994:675198 CAPLUS
DN 121:275198
TI Formation of Functional Cross- ***Species*** Heterodimers of Ornithine Decarboxylase
AU Osterman, Andrei; Grishin, Nick V.; Kinch, Lisa N.; Phillips, Margaret A.
CS Southwestern Medical Center, University of Texas, Dallas, TX, 75230, USA
SO Biochemistry (1994), 33(46), 13662-7
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English

L1 ANSWER 22 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1994:501532 CAPLUS
DN 121:101532
TI Aluminum Fluoride Activation of Bovine Transducin Induces Two Distinct Conformational Changes in the .alpha. Subunit
AU Mittal, Rohit; Cerione, Richard A.; Erickson, Jon W.
CS Department of Pharmacology, Cornell University, Ithaca, NY, 14853-6401, USA
SO Biochemistry (1994), 33(33), 10178-84
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English

L1 ANSWER 23 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1993:466524 CAPLUS
DN 119:66524
TI Refolding of luciferase ***subunits*** from urea and assembly of the active heterodimer. Evidence for folding intermediates that precede and follow the dimerization step on the pathway to the active form of the ***enzyme***
AU Ziegler, Miriam M.; Goldberg, Michel E.; Chaffotte, Alain F.; Baldwin, Thomas O.
CS Inst. Biosci. Technol., Texas A and M Univ., College Station, TX, 77843, USA
SO J. Biol. Chem. (1993), 268(15), 10760-5
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L1 ANSWER 24 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1993:423663 CAPLUS
DN 119:23663
TI Contribution of folding steps involving the individual ***subunits***

of bacterial luciferase to the assembly of the active heterodimeric ***enzyme***
AU Baldwin, Thomas O.; Ziegler, Miriam M.; Chaffotte, Alain F.; Goldberg, Michel E.
CS Inst. Biosci. Technol., Texas A and M Univ., College Station, TX, 77843, USA
SO J. Biol. Chem. (1993), 268(15), 10766-72
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L1 ANSWER 25 OF 52 CAPLUS COPYRIGHT 2002 ACS
AN 1993:229092 CAPLUS
DN 118:229092
TI Purified native ***subunits*** of bacterial luciferase are active in the bioluminescence reaction but fail to assemble into the .alpha..beta. structure
AU Sinclair, James F.; Waddle, Jenny J.; Waddill, E. Florence; Baldwin, Thomas O.
CS Cent. Macromol. Design, Texas A and M Univ., College Station, TX, 77843-2128, USA
SO Biochemistry (1993), 32(19), 5036-44
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English

=> d l2 11-25
YOU HAVE REQUESTED DATA FROM FILE 'BIOSIS, CAPLUS, EMBASE' - CONTINUE? (Y)/N:y

L2 ANSWER 11 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 8
AN 1993:347188 BIOSIS
DN PREV199396044188
TI Contribution of folding steps involving the individual ***subunits*** of bacterial luciferase to the assembly of the active heterodimeric ***enzyme*** .
AU Baldwin, Thomas O. (1); Ziegler, Miriam M.; Chaffotte, Alain F.; Goldberg, Michel E.
CS (1) Dep. Biochem. Biophysics, Texas A and M University, College Station, TX 77843 USA
SO Journal of Biological Chemistry, (1993) Vol. 268, No. 15, pp. 10766-10772. ISSN: 0021-9258.
DT Article
LA English

L2 ANSWER 12 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 9
AN 1993:347189 BIOSIS
DN PREV199396044189
TI Refolding of luciferase ***subunits*** from urea and assembly of the active heterodimer: Evidence for folding intermediates that precede and follow the dimerization step on the pathway to the active form of the ***enzyme*** .
AU Ziegler, Miriam M.; Goldberg, Michel E.; Chaffotte, Alain F.; Baldwin,

Thomas O. (1)
CS (1) Dep. Biochem. Biophysics, Texas A and M University, College Station, TX 77843 USA
SO Journal of Biological Chemistry, (1993) Vol. 268, No. 15, pp. 10760-10765. ISSN: 0021-9258.
DT Article
LA English

L2 ANSWER 13 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 10
AN 1993:347161 BIOSIS
DN PREV199396044161
TI Purified native ***subunits*** of bacterial luciferase are active in the bioluminescence reaction but fail to assemble into the alpha-beta structure.
AU Sinclair, James F.; Waddle, Jenny J.; Waddill, E. Florence; Baldwin, Thomas O. (1)
CS (1) Dep. Biochem. Biophysics, Texas A and M Univ., College Station, TX 77843 USA
SO Biochemistry, (1993) Vol. 32, No. 19, pp. 5036-5044. ISSN: 0006-2960.
DT Article
LA English

L2 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2002 ACS
AN 1992:210750 CAPLUS
DN 116:210750
TI Random bio-oligomer library, a method of synthesis thereof, and a method of use of members of the library as effectors in diagnosis and therapy
IN Lam, Kit Sang; Salmon, Sydney E.; Hruby, Victor J.; Hersh, Evan M.; Al-Obeidi, Fahad
PA Bioligand, Inc., USA
SO PCT Int. Appl., 110 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9200091	A1	19920109	WO 1991-US4666	19910701
	W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KR, LK, MC, MG, MW, NO, PL, RO, SD, SU				
	RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
	US 5650489	A	19970722	US 1991-717454	19910619
	AU 9182385	A1	19920123	AU 1991-82385	19910701
	AU 659091	B2	19950511		
	EP 542770	A1	19930526	EP 1991-913268	19910701
	EP 542770	B1	19990127		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	JP 06500308	T2	19940113	JP 1991-512650	19910701
	PL 168354	B1	19960229	PL 1991-299372	19910701
	PL 169616	B1	19960830	PL 1991-308051	19910701
	RO 112336	B1	19970829	RO 1993-398	19910701
	RU 2145233	C1	20000210	RU 1992-16543	19910701
	NO 9300011	A	19930222	NO 1993-11	19930104
PRAI	US 1990-546845	A	19900702		

US 1991-717454 A 19910619
WO 1991-US4666 A 19910701

L2 ANSWER 15 OF 25 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 92260572 EMBASE
DN 1992260572
TI Expression and assembly of a functional E1 component (.alpha.2.beta.2) of mammalian branched-chain .alpha.-ketoacid dehydrogenase complex in Escherichia coli.
AU Davie J.R.; Wynn R.M.; Cox R.P.; Chuang D.T.
CS Dept. of Biochemistry, University of Texas SW Medical Ctr., 5323 Harry Hines Blvd.,Dallas, TX 75235-9038, United States
SO Journal of Biological Chemistry, (1992) 267/23 (16601-16606).
ISSN: 0021-9258 CODEN: JBCHA3
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L2 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2002 ACS
AN 1991:674506 CAPLUS
DN 115:274506
TI Protein-protein interactions of HIV-1 reverse transcriptase: implication of central and C-terminal regions in subunit binding
AU Becerra, S. Patricia; Kumar, Amalendra; Lewis, Marc S.; Widen, Steven G.; Abbotts, John; Karawya, Essam M.; Hughes, Stephen H.; Shiloach, Joseph; Wilson, Samuel H.
CS Lab. Biochem., Natl. Cancer Inst., Bethesda, MD, 20892, USA
SO Biochemistry (1991), 30(50), 11707-19
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English

L2 ANSWER 17 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 11
AN 1991:369069 BIOSIS
DN BA92:57294
TI ROLE OF THE TETRAMERIC STRUCTURE OF ESCHERICHIA-COLI PYRUVATE OXIDASE IN ***ENZYME*** ACTIVATION AND LIPID BINDING.
AU WANG A-Y; CHANG Y-Y; CRONAN J E JR
CS DEP. MICROBIOLOGY BIOCHEM., UNIVERSITY ILLINOIS, URBANA, ILL. 61801.
SO J BIOL CHEM, (1991) 266 (17), 10959-10966.
CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English

L2 ANSWER 18 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 12
AN 1988:159629 BIOSIS
DN BA85:83282
TI SUBUNIT STRUCTURE OF A YEAST SITE-SPECIFIC ENDODEOXYRIBONUCLEASE ENDO-SCE-I A STUDY USING MONOCLONAL ANTIBODIES.
AU NAKAGAWA K-I; HASHIKAWA J-I; MAKINO O; ANDO T; SHIBATA T
CS LAB. MICROBIOL., RIKEN INST., WAKO-SHI, SAITAMA, JAPAN 351-01.
SO EUR J BIOCHEM, (1988) 171 (1-2), 23-30.
CODEN: EJBCAI. ISSN: 0014-2956.

FS BA; OLD
LA English

L2 ANSWER 19 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 13
AN 1985:305484 BIOSIS
DN BA79:85480
TI 4 AMINOBUTYRATE AMINOTRANSFERASE REACTION OF SULFHYDRYL RESIDUES CONNECTED WITH CATALYTIC ACTIVITY.
AU CHOI S Y; CHURCHICH J E
CS DEP. BIOCHEM., UNIV. TENN., KNOXVILLE, TENN. 37996-0840.
SO J BIOL CHEM, (1985) 260 (2), 993-997.
CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English

L2 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 14
AN 1985:162935 CAPLUS
DN 102:162935
TI Loss of liposome binding of NADH dehydrogenase from alkalophilic Bacillus on subtilisin digestion
AU Xu, Xuemin; Hisae, Nobuo; Koyama, Noriyuki; Nosoh, Yoshiaki
CS Lab. Nat. Prod. Chem., Tokyo Inst. Technol., Yokohama, 227, Japan
SO FEBS Lett. (1985), 181(2), 313-17
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English

L2 ANSWER 21 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 15
AN 1981:280944 BIOSIS
DN BA72:65928
TI SUBUNIT INTERACTIONS IN GAMMA GLUTAMYL TRANS PEPTIDASE RECONSTITUTION OF THE ACTIVE ***SPECIES*** FROM ISOLATED ***SUBUNITS*** .
AU GARDELL S J; TATE S S
CS DEP. BIOCHEM., CORNELL UNIV. MED. COLL., NEW YORK, N.Y. 10021.
SO J BIOL CHEM, (1981) 256 (10), 4799-4804.
CODEN: JBCHA3. ISSN: 0021-9258.
FS BA; OLD
LA English

L2 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2002 ACS
AN 1981:170080 CAPLUS
DN 94:170080
TI Isolation of pure bovine plasma amine oxidase A and the effect of evolution on the chemical and enzymic properties of copper-amine oxidases
AU Watanabe, Kazuho; Ishizaki, Hiroyuki; Fujita, Valerie; Yasunobu, Kerry
CS Sch. Med., Univ. Hawaii, Honolulu, HI, 96822, USA
SO Dev. Biochem. (1980), 10(Front. Protein Chem.), 551-62
CODEN: DEBIDR; ISSN: 0165-1714
DT Journal
LA English

L2 ANSWER 23 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 16
AN 1978:185954 BIOSIS
DN BA65:72954

TI A SIMPLE METHOD FOR THE IDENTIFICATION OF ALTERED ***SUBUNITS*** IN MUTANT RNA POLYMERASES OF ESCHERICHIA-COLI.
AU SUGIURA M; ITO N; SUZUKI M
CS NATL. INST. GENET., MISHIMA, SHIZUOKA 411, JPN.
SO ANAL BIOCHEM, (1978) 84 (1), 337-339.
CODEN: ANBCA2. ISSN: 0003-2697.
FS BA; OLD
LA English

L2 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 17
AN 1975:510410 CAPLUS
DN 83:110410
TI Mitochondrial aspartate aminotransferase-independent function of the catalytic binding sites
AU Lee, Yan-Hwa; Churchich, Jorge E.
CS Dep. Biochem., Univ. Tennessee, Knoxville, Tenn., USA
SO J. Biol. Chem. (1975), 250(14), 5604-8
CODEN: JBCHA3
DT Journal
LA English

L2 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2002 ACS
AN 1975:493019 CAPLUS
DN 83:93019
TI Cooperative interactions in hybrids of aspartate transcarbamylase containing succinylated regulatory polypeptide chains
AU Nagel, Glenn M.; Schachman, H. K.
CS Dep. Mol. Biol., Univ. California, Berkeley, Calif., USA
SO Biochemistry (1975), 14(14), 3195-203
CODEN: BICHAW
DT Journal
LA English

=> d l2 11-25 ab
YOU HAVE REQUESTED DATA FROM FILE 'BIOSIS, CAPLUS, EMBASE' - CONTINUE? (Y)/N:y

L2 ANSWER 11 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 8
AB Bacterial luciferase is an alpha-beta heterodimer with a single active center in which the reaction of reduced FMN, O-2, and an aliphatic aldehyde yields a photon of blue-green light. We have shown that refolding of the luciferase ***subunits*** from 5 M urea occurs via the intermediacy of several ***species*** , one of which is an inactive heterodimeric structure, resulting from the dimerization of alpha and beta, which isomerizes to the active alpha-beta structure in a first-order reaction (Ziegler, M. M., Goldberg, M. E., Chaffotte, A. F., and Baldwin, T. O. (1993) J. Biol. Chem. 268, 10760-10765). We have also demonstrated the existence of an inactive heterodimeric ***species*** that is well populated at equilibrium in the presence of 1.6-2.8 M urea (Clark, A. C., Sinclair, J. F., and Baldwin, T. O. (1993) J. Biol. Chem. 268, 10773-10779). We have separated the alpha and beta ***subunits*** by ion exchange chromatography and investigated the effects on reformation of active luciferase of allowing the individual ***subunits*** to refold separately prior to ***mixing*** . These investigations show that the

lag in formation of active luciferase is due to slow steps in folding of the individual ***subunits*** . The beta subunit appears to fold faster than the a subunit, but folding of the beta subunit also shows a distinct lag. When the a and beta ***subunits*** were allowed to refold from urea for periods of several hours or more prior to ***mixing*** , the yield of active heterodimeric luciferase was compromised, which is consistent with the finding that individual ***subunits*** produced in vivo fold into structures incompetent to interact with each other to form the active heterodimer (Waddle, J. J., Johnston, T. C., and Baldwin, T. O. (1987) Biochemistry 26, 4917-4921). It appeared that the rate with which the beta subunit assumed the heterodimerization-incompetent structure was faster than the rate with which the a subunit became heterodimerization-incompetent. These observations support a model for folding and assembly of the ***subunits*** of luciferase in which the two ***subunits*** fold into assembly-competent structures that associate to form the heterodimer. In a slow competing process, the ***subunits*** undergo a conformational rearrangement to form stable structures incompetent to form heterodimers. It appears that the association of the luciferase ***subunits*** might constitute an example of one polypeptide modifying the folding pathway of another, a model that is consistent with the suggestion that the formation of the heterodimeric structure of luciferase is a kinetic trap on the folding pathway of the individual ***subunits*** (Sugihara, J., and Baldwin, T. O. (1988) Biochemistry 27, 2872-2880).

L2 ANSWER 12 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 9

AB Conditions have been established that allow reversible refolding of luciferase from 5 M urea. The kinetics of formation of the active ***enzyme*** showed a concentration-independent lag, suggesting the existence of intermediate structures on the pathway of refolding. The rate of approach to the final level of activity was strongly concentration-dependent at protein concentrations below 10 mu-g/ml, but at concentrations above about 20 mu-g/ml, the rate of approach to the final activity value did not change with concentration. The concentration dependence presumably reflects the second-order step yielding the heterodimeric structure. The finding that at concentrations above 20 mu-g/ml, the rate becomes insensitive to concentration suggests that under these conditions, some step subsequent to dimerization becomes rate-limiting. When the refolding reaction was initiated by dilution out of 5 M urea at 50 mu-g/ml followed at various times by a secondary dilution to a final concentration of 5 mu-g/ml, it was found that the increase in activity continued at the rate characteristic of the higher protein concentration for a period of about 1-2 min following the dilution before slowing to the rate expected for the lower protein concentration. These observations indicate that there are inactive heterodimeric ***species*** that form from assembly of the individual ***subunits*** and that these ***species*** must undergo further folding to yield the active heterodimeric ***species*** . At protein concentrations of 5-50 mu-g/ml, the final yield of active ***enzyme*** was about 65-85%, decreasing at higher and lower concentrations. At higher concentrations, aggregation probably accounts for the limit in recovery, whereas at lower concentrations, it appears that the reduced yield of activity is due to the competing process of the folding of one or both individual ***subunits*** into some form incompetent to interact with each other.

These experiments demonstrate the existence of slow steps in the refolding of luciferase ***subunits*** from urea and the formation of the active heterodimeric structure, both preceding and following the dimerization. Furthermore, the failure of protein at low concentrations to efficiently reassemble into the active heterodimer is consistent with the prior finding that luciferase ***subunits*** produced independently in Escherichia coli fold into conformations that cannot interact to form the active heterodimer upon ***mixing*** (Waddle, J. J., Johnston, T. C., and Baldwin, T. O. (1987) Biochemistry 26, 4917-4921).

L2 ANSWER 13 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 10

AB We have expressed the alpha and beta ***subunits*** of bacterial luciferase, encoded by luxA and luxB, from separate plasmids in Escherichia coli and developed an efficient purification scheme that yields many milligrams of protein of greater than 90% homogeneity. Earlier experiments showed that ***subunits*** synthesized separately assume conformations that do not assemble into the active luciferase heterodimer without prior denaturation. This observation led to the proposal that formation of the luciferase heterodimer involved interactions between intermediate conformations on the folding pathway of one or both of the ***subunits*** (Waddle, J. J., Johnston, T. C., & Baldwin, T. O. (1987) Biochemistry 26, 4917-4921). Both of the ***subunits*** catalyze reduced flavin- and aldehyde-dependent bioluminescence reactions that are similar to that of the heterodimer in terms of reduced flavin binding affinity, aldehyde binding and inhibition, and kinetics of the overall bioluminescence reaction, but at an efficiency of about 5 times 10-6 that of the heterodimer. Spectrophotometric analyses suggest that the structures of the individual ***subunits*** are similar to, but not identical to, the structures of the ***subunits*** in the heterodimer. ***Mixing*** of the two ***subunits*** under nondenaturing conditions did not lead to formation of the high specific activity heterodimer, even after prolonged incubation. Likewise, treatment of a stoichiometric mixture of the individual ***subunits*** with 5 M urea followed by 50-fold dilution of the urea did not yield the active heterodimer under the same conditions that yield high levels of active ***enzyme*** following denaturation of the native heterodimer (Ziegler, M. M., Goldberg, M. E., Chaffotte, A. F., & Baldwin, T. O. (1993) J. Biol. Chem. 268, 10760-10765). However, refolding of the alpha and beta ***subunits*** together from 5 M urea following unfolding with 5 M guanidine HCl resulted in formation of the high specific activity alpha-beta ***species*** , suggesting that the native isolated alpha and/or beta ***species*** is resistant to unfolding by 5 M urea. The results indicate that formation of the heterodimer in vivo must occur by interaction of transient subunit ***species*** that are distinct from the stable forms of the ***subunits*** that we have purified from cell extracts.

L2 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2002 ACS

AB A set of bio-oligomers (peptides, oligoribonucleotides, oligodeoxyribonucleotides, or peptide-oligonucleotide chimeras) to be screened for effector mols. is prepd. by (1) providing .gtoreq.2 aliquots of a solid phase support (e.g. beads) for the random sequences of ***subunits*** ; (2) sep. introducing a set of ***subunits*** to the aliquots of the solid phase support; (3) completely coupling the ***subunits*** to substantially all the sites of the solid phase support

to form a solid phase support/new subunit combination; (4) assessing the completeness of coupling and, if necessary, forcing the reaction to completeness; (5) thoroughly ***mixing*** the aliquots of the solid phase support/new subunit combination; (6) repeating steps 1-5 the desired no. of times; (7) removing the protecting groups so that the bio-oligomer remains linked to the solid phase support. This method permits the synthesis of e.g. a random peptide pool with 105-107 different peptide ***species*** . Methods of screening the support-bound bio-oligomers for a biol. activity or property of interest, and isolating and sequencing those showing the activity or property, are given. Thus, a large library of peptides X-X-X-X-X-.beta.-Ala-aminocaproic acid-ethylenediamine-resin (X = amino acid) (2,476,099 possible peptides) was synthesized on 3 g (.apprx.2 x 106) polydimethylacrylamide beads so that each bead bore a single unique peptide sequence. Streptavidin-binding beads were identified by incubation with a streptavidin-alk. phosphatase conjugate and subsequently with ***enzyme*** substrate (5-bromo-4-chloro-3-indolyl phosphate and nitro blue tetrazolium). Streptavidin-binding beads (.apprx.75) turned dark blue, while the others remained colorless; the former all had a consensus sequence of HPQ or HPM, which bound to the biotin-binding site of streptavidin.

L2 ANSWER 15 OF 25 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AB We have expressed an active recombinant E1 decarboxylase component of the mammalian branched-chain .alpha.-ketoacid dehydrogenase complex in Escherichia coli by subcloning mature E1.alpha. and E1.beta. subunit cDNA sequences into a bacterial expression vector. To permit affinity purification under native conditions, the mature E1.alpha. subunit was fused with the affinity ligand E. coli maltose-binding protein (MBP) through an endoprotease Factor Xa-specific linker peptide. When co-expressed, the MBP-E1.alpha. fusion and E1.beta. ***subunits*** were shown to co-purify as a MBP-E1 component that exhibited both E1 activity and binding competence for recombinant branched-chain E2 component. In contrast, in vitro ***mixing*** of individually expressed MBP-E1.alpha. and E1.beta. did not result in assembly or produce E1 activity. Following proteolytic removal of the affinity ligand and linker peptide with Factor Xa, a recombinant E1 ***species*** was eluted from a Sephacryl S-300HR sizing column as an enzymatically active 160-kDa ***species*** . The latter showed 1:1 subunit stoichiometry, which was consistent with an .alpha.2.beta.2 structure. The recovery of this 160-kDa recombinant E1 ***species*** (estimated at 0.07% of total lysate protein) was low, with the majority of the recombinant protein lost as insoluble aggregates. Our findings suggest that the concurrent expression of both E1.alpha. and E1.beta. ***subunits*** in the same cellular compartment is important for assembly of both ***subunits*** into a functional E1 .alpha.2.beta.2 heterotetramer. By using this co-expression system, we also find that the E1.alpha. missense mutation (Tyr-393 .fwdarw. Asn) characterized in Mennonites with maple syrup urine disease prevents the assembly of soluble E1 heterotetramers.

L2 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2002 ACS

AB Human immunodeficiency virus 1 (HIV-1) reverse transcriptase (RT) purified from virions is composed of a .apprx.51,000-dalton polypeptide and a .apprx.66,000-dalton polypeptide that are thought to be in heterodimer structure and are identical except for a 15,000-dalton C-terminal truncation in the smaller ***species*** . Here, individual bacterial recombinant RTs were prepd. as the .apprx.66,000-dalton polypeptide (p66)

or as the .apprx.51,000-dalton polypeptide (p51) and various in vitro protein-protein binding expts. were conducted. Anal. ultracentrifugation studies in 0.25M NaCl at pH 6.5 revealed that p66 was in monomer-dimer equil. with an assocn. const. (Ka) of 5.1 .times. 104 M-1. The p51 failed to dimerize and behaved as a monomer under these conditions.
Mixing of the p66 and p51 polypeptides resulted in a 1:1 heterodimer with Ka of 4.9 .times. 105 M-1. These results on the formation of the p66-p66 homodimer and p66-p51 heterodimer were confirmed by gel filtration anal. using fast-protein liq. chromatog. Superose-12 columns. The binding between p66 and individual p66 segment polypeptides also was obsd. using an immunopptn. assay. The binding between p51 and p66 in this assay was resistant to the presence of .apprx.1M NaCl, suggesting that the binding free energy has a large hydrophobic component. C-terminal truncation of p66 to yield a 29-kDa polypeptide eliminated binding to p66, and N-terminal truncation of p66 to yield a 15-kDa peptide also eliminated binding to p66. The results indicated that purified individual RT peptides p51 and p66 are capable of binding to form a 1:1 heterodimer and suggest that the central region of p66 is required for this subunit binding; the C-terminal region (15,000 daltons) of p66 appeared to be required also, as p51 alone did not dimerize.

L2 ANSWER 17 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 11

AB Pyruvate oxidase of Escherichia coli, an ***enzyme*** greatly activated by phospholipids, is a tetramer of a Mr 62,000 subunit. We have utilized the differing electrophoretic mobilities of several mutant oxidases on native polyacrylamide gels to study the role of the quaternary structure of the ***enzyme*** in the activation process. We found that when two poxB gene alleles coexisted in cells, heterotetrameric ***species*** were formed in addition to homotetramers. The concentration of each tetrameric ***species*** varied according to the concentration of the different ***subunits*** present, and the distribution seemed virtually identical to those expected from random ***mixing*** . We showed that the intrinsic activity of pyruvate oxidase was not affected by interactions among the four ***subunits*** . However, binding of the ***enzyme*** to lipids, a property required for function in vivo, required that a tetramer contain at least two ***subunits*** capable of lipid binding. Our data fit the model proposed previously in which the carboxyl termini of two ***subunits*** interaction to form a functional lipid-binding domain. We also have detected oxidase activity in a form of oxidase of unusually high electrophoretic mobility. This form seems to be either a monomeric or a dimeric form (more probably the former) of the oxidase subunit.

L2 ANSWER 18 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 12

AB EndoSceI is a eucaryotic site-specific endoDNase of 120 kDa that causes double-stranded scission at well defined sites, but is distinguishable from procaryotic restriction endonucleases by its mode of sequence recognition and lack or related specific DNA modification. In purified preparations of endoSceI, only two polypeptide ***species*** of 75 kDa (75-kDa peptide) and 50 kDa (50-kDa peptide) are detected in apparently equal amounts. We prepared mousemonoclonal IgGs that bound specifically to the 75-kDa peptide (but not the 50-kDa peptide) without inhibiting the endoSceI activity. Immunoprecipitation experiments with these IgGs revealed that the 75-kDa peptide and the 50-kDa peptide are physically

associated with each other and with the endonucleolytic activity. Full endoSceI activity was recovered by ***mixing*** the purified 75-kDa peptide and the partially purified 50-kDa peptide, each of which exhibited little or no endonuclease activity alone. These observations indicate that endoSceI consists of two non-identical ***subunits*** of 75 kDa and 50 kDa, and that both ***subunits*** are required for full ***enzyme*** activity.

L2 ANSWER 19 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 13

AB 4-Aminobutyrate aminotransferase is inactivated by preincubation with N-(1-pyrene)maleimide (***mixing*** molar ratio 10:1) at pH 7. The reaction with N-(1-pyrene)maleimide was monitored by fluorescence spectroscopy and the degree of labeling of the ***enzyme*** determined by absorption spectroscopy. The blocking of 2 cysteinyl residues/ ***enzyme*** dimer is needed for inactivation of the aminotransferase. The time course of the reaction is significantly affected by the substrate .alpha.-ketoglutarate, which afforded complete protection against the loss of catalytic activity. Trypsin digestion of pyrene-labeled aminotransferase, followed by gel filtration and fingerprint analysis, revealed the presence of only 1 peptide tagged with the fluorescent probe. The reaction of .apprx. 1.9 SH residues/dimer with iodosobenzoate resulted in ***enzyme*** inactivation together with a formation of an oligomeric ***species*** of Mr [molecular ratio] = 100,000 detectable by sodium dodecyl sulfate-polyacrylamide gel electrophoresis. The cross-linked ***subunits*** are dissociated by addition of 2-mercaptoethanol which also restores full catalytic activity. These observations are consistent with the concept that inactivation of 4-aminobutyrate aminotransferase by iodosobenzoate proceeds through disulfide bond formation between vicinal cysteinyl residues of the protein. Apparently, the critical SH groups of the ***enzyme*** are situated on opposite sides of the dimeric structure at the subunit interfaces.

L2 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 14

AB Alkalophile NADH dehydrogenase consisting of two 65-kilodalton (kDa) ***subunits*** was changed by subtilisin into an ***enzyme*** ***species*** consisting of two 38-kDa ***subunits*** . The amino acid compn. and ***enzyme*** activity per mol. of the subtilisin-treated ***enzyme*** were almost the same as those of the native ***enzyme*** , resp. On ***mixing*** with phospholipid liposome, the conformation of the native ***enzyme*** was changed, as suggested by the changes in the type of Arrhenius plot, the CD spectrum, and ***enzyme*** activity. These conformational properties of the subtilisin-treated ***enzyme*** , on the other hand, were not affected by liposome. Gel filtration of the subtilisin-treated ***enzyme*** mixed with the liposome showed no binding of the protein to liposome.

L2 ANSWER 21 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 15

AB Rat kidney .gamma.-glutamyl transpeptidase is composed of 2 unequal glycopeptide ***subunits*** (heavy (H) and light (L)), MW = 46,000 and 22,000, respectively. Treatment of the ***enzyme*** with urea at neutral pH values results in extensive proteolytic degradation of the H chain, presumably accounting for the relatively low recovery of activity upon subsequent removal of urea by dialysis. Treatment of the ***enzyme*** with urea in the presence of acetic acid results in rapid

loss of activity, but the ***subunits*** are not degraded. Significant activity can be restored by dialysis, the extent of reconstitution depending upon the pH at which the renaturation (by dialysis) is carried out, and is enhanced by the presence of a SH compound during the renaturation process. The denatured ***subunits*** were isolated by gel filtration of acid/urea-treated ***enzyme*** . Individually renatured ***subunits*** do not exhibit transpeptidase activity, and ***mixing*** of the renatured ***subunits*** does not lead to reconstitution of activity. Part of the reason for the latter observation may be the tendency of the denatured L chain to form inactive polymers upon renaturation. Reconstitution of activity from isolated ***subunits*** requires prior ***mixing*** of the denatured ***subunits*** followed by removal of urea by dialysis. The reconstituted, active ***species*** can be separated from the inactive ***species*** by gel filtration and was shown to be, like the native ***enzyme*** , a heterologous dimer (MW = 68,000) composed of an H and an L chain, and which exhibits catalytic properties similar to the native ***enzyme*** . The low activity exhibited by samples containing renatured H has been ascribed to the presence of reconstituted HL oligomer. Characterization of the reconstituted ***species*** has been facilitated by the use of the glutamine antagonist L-(.alpha.S,5S)-.alpha.-amino-3-chloro-4,5-dihydro-5-isoxazoleacetic acid (AT-125), which irreversibly inactivates the native and reconstituted ***enzyme*** by covalently and stoichiometrically binding to the L subunit. AT-125 does not bind to the inactive, renatured ***subunits*** .

L2 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2002 ACS

AB Two forms of Cu-contg. amine oxidase, A and B, were isolated from bovine plasma. Not all batches of plasma contained the A ***enzyme*** , whereas all prepns. contained the B form. The 2 forms are apparently due to ***mixing*** of blood plasma from 2 different ***species*** of steer. The properties of bovine, Aspergillus niger, and pea seedling oxidases were compared. Bovine and Aspergillus ***enzymes*** had similar amino acid compns. Bovine plasma ***enzymes*** A and B showed considerable differences in their amino acid compns., esp. with respect to alanine and serine contents. Preliminary data suggest that the NH2 group of the N-terminal amino acid is blocked and may be the site of covalently bound org. cofactor. The protomer of bovine and pea ***enzymes*** consists of 2 ***subunits*** linked by SS bonds, whereas in the protomer of Aspergillus, ***subunits*** are not linked in this manner. Rabbit antibody to bovine oxidase B did not ppt. A. niger or pea ***enzymes*** in Ouchterlony immunodiffusion tests, although it inhibited the A. niger ***enzyme*** to an intermediate extent compared to bovine ***enzyme*** B. It is proposed that all of the Cu-amine oxidases investigated have evolved from a common ancestor and that changes occurred in the subunit binding region eventually resulting in SS bridge formation.

L2 ANSWER 23 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 16

AB During the course of isolating temperature-sensitive E. coli mutants of RNA polymerase, a simple procedure to identify altered ***subunits*** was developed. The procedure consists of ***mixing*** a mutant ***enzyme*** with an excess of a wild-type subunit followed by denaturation and renaturation. This gives active ***enzyme***

molecules in which the majority of a subunit ***species*** is replaced by a corresponding wild-type subunit.

L2 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 17

AB Mitochondrial aspartate aminotransferase from beef liver is a dimer of identical ***subunits*** . The enzymic activity of the resolved ***enzyme*** was restored on addn. of the cofactor pyridoxal 5-phosphate (I). The binding of 1 mol. of cofactor restored 50% of the original enzymic activity, whereas the binding of a 2nd mol. of cofactor brought about >95% recovery of the catalytic activity. Following addn. of 1 mole of I/dimer, 3 forms of the ***enzyme*** existed in soln.: apoenzyme-2 I, apoenzyme-1 I, and apoenzyme. The ***enzyme*** ***species*** were sepd. by affinity chromatog. and the following distribution was found: apoenzyme-2 I/apoenzyme-1 I/apoenzyme in a ratio of 2/6/2. Similar distribution was obsd. after redn. with NaBH4 of the mixt. contg. apoenzyme and I at a ***mixing*** ratio of 1:1. Fluorometric titrns. conducted on samples of apoenzyme and apoenzyme-1 I revealed that the ***enzyme*** ***species*** display identical affinity towards the inhibitor 4-pyridoxic-5-phosphate (KD = 1.1 .times. 10-6M). Thus, the binding of the cofactor to 1 of the catalytic sites does not affect the affinity of the 2nd site for the inhibitor. These results, obtained by 2 independent methods, lend strong support to the hypothesis that the 2 ***subunits*** of the ***enzyme*** function independently.

L2 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2002 ACS

AB Succinylated derivs. of the regulatory subunit of aspartate transcarbamylase of Escherichia coli were prepd. by treating the intact ***enzyme*** with succinic anhydride followed by dissocn. of the modified protein into catalytic and regulatory ***subunits*** which were sepd. by ion-exchange chromatog. The succinylated regulatory ***subunits*** were used in hybridization expts. with native ***subunits*** to study the organization of the 6 regulatory polypeptide chains in the intact ***enzyme*** . Rapid ***mixing*** of succinylated and native regulatory ***subunits*** with native catalytic ***subunits*** yielded a 4-membered hybrid set of reconstituted ***enzyme*** -like mols.; hence, the assembly process involves 3 regulatory combining units and the 6 regulatory polypeptide chains in the intact ***enzyme*** must be arranged as 3 dimeric ***subunits*** . When the modified and native regulatory ***subunits*** were incubated together for only brief periods (<1 min) followed by the addn. of catalytic ***subunits*** , the resulting hybrid set was complex with no resolution of discrete ***species*** . Apparently, the isolated regulatory dimers dissoc. readily and reversibly into single polypeptide chains due to relatively weak intrasubunit bonding domains. In contrast, after reconstitution of ***enzymelike*** mols., the incorporated succinylated regulatory ***subunits*** did not exchange with free ***subunits*** . ***Enzymelike*** mols. contg. 3 extensively succinylated regulatory ***subunits*** showed reduced binding of the inhibitor, CTP, and lacked both the homotropic and heterotropic effects characteristic of native aspartate transcarbamylase. Prepns. contg. only slightly succinylated regulatory ***subunits*** showed only little inhibition by CTP and considerable cooperativity. The decrease in homotropic effects in these reconstituted mols. correlated with the redn. in the succinate-promoted change in the sedimentation coeff. Reconstituted ***enzymelike*** mols. contg. regulatory

subunits which had been extensively succinylated in the presence of CTP retained their binding capacity even though they were only slightly inhibited by CTP and exhibited reduced cooperativity. Hybrid mols. contg. both native and succinylated regulatory ***subunits*** also possessed reduced allosteric behavior.

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=> s l2 and evolution
L9 3 L2 AND EVOLUTION

=> d l9 1-3

L9 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:167333 BIOSIS
DN PREV199900167333
TI Verification of glaucocystophyta from an aspect of membrane ***evolution*** theory.
AU Nakamura, Hakobu (1)
CS (1) Dep. Biol., Fac. Sci., Konan Univ., 8-9-1 Okamoto, Higashinada-ku, Kobe 658 Japan
SO Memoirs of the Konan University Science Series, (1997) Vol. 44, No. 2, pp. 27-33.
ISSN: 0452-4160.
DT Article
LA English

L9 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 1981:170080 CAPLUS
DN 94:170080

TI Isolation of pure bovine plasma amine oxidase A and the effect of ***evolution*** on the chemical and enzymic properties of copper-amine oxidases
AU Watanabe, Kazuho; Ishizaki, Hiroyuki; Fujita, Valerie; Yasunobu, Kerry
CS Sch. Med., Univ. Hawaii, Honolulu, HI, 96822, USA
SO Dev. Biochem. (1980), 10(Front. Protein Chem.), 551-62
CODEN: DEBIDR; ISSN: 0165-1714
DT Journal
LA English

L9 ANSWER 3 OF 3 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 97002113 EMBASE
DN 1997002113
TI Direct evidence for the localization of the steroid-binding site of the plasma sex steroid-binding protein (SBP or SHBG) at the interface between the ***subunits*** .
AU Sui L.-M.; Hughes W.; Hoppe A.J.; Petra P.H.
CS P.H. Petra, Department of Biochemistry, University of Washington, Seattle, WA 98195, United States
SO Protein Science, (1996) 5/12 (2514-2520).
ISSN: 0961-8368 CODEN: PRCIEI
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

=> d l9 2 3 ab

L9 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
AB Two forms of Cu-contg. amine oxidase, A and B, were isolated from bovine plasma. Not all batches of plasma contained the A ***enzyme*** , whereas all prepns. contained the B form. The 2 forms are apparently due to ***mixing*** of blood plasma from 2 different ***species*** of steer. The properties of bovine, Aspergillus niger, and pea seedling oxidases were compared. Bovine and Aspergillus ***enzymes*** had similar amino acid compns. Bovine plasma ***enzymes*** A and B showed considerable differences in their amino acid compns., esp. with respect to alanine and serine contents. Preliminary data suggest that the NH2 group of the N-terminal amino acid is blocked and may be the site of covalently bound org. cofactor. The protomer of bovine and pea ***enzymes*** consists of 2 ***subunits*** linked by SS bonds, whereas in the protomer of Aspergillus, ***subunits*** are not linked in this manner. Rabbit antibody to bovine oxidase B did not ppt. A. niger or pea ***enzymes*** in Ouchterlony immunodiffusion tests, although it inhibited the A. niger ***enzyme*** to an intermediate extent compared to bovine ***enzyme*** B. It is proposed that all of the Cu-amine oxidases investigated have evolved from a common ancestor and that changes occurred in the subunit binding region eventually resulting in SS bridge formation.

L9 ANSWER 3 OF 3 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AB Complete dissociation of dimeric plasma sex steroid-binding protein (SBP or SHBG) was obtained in 6 M urea at 10.degree.C. Removal of urea resulted in the refolding of monomers, followed by reformation of dimeric SBP, which migrates with the same mobility as the native protein. Dimerization

does not require Ca++ or steroid. Renatured monomers yield dimers with dissociation constants for 5.alpha.-dihydrotesterone (DHT) and 17.beta.-estradiol (E2) indistinguishable from those of native human SBP. This phenomenon was also demonstrated by ***mixing*** human and rabbit SBPs that, upon renaturation, form a hybrid dimer composed of one human subunit and one rabbit subunit. The hybrid binds both DHT and E2 in contrast to rSBP, which only binds the androgen. Therefore, we conclude that (1) docking of the two ***subunits*** creates an asymmetric steroid-binding site located at the interlace between the ***subunits*** , and (2) only one face of the dimer defines the specificity for binding E2 by encompassing portion of a structural motif that recognizes the flat ring A of E2. The remaining portion, which recognizes the saturated ring A of DHT, is shared by both faces of the dimer. Because native monomers do not exist alone, the often-asked question of whether the SBP monomer binds steroid can be considered meaningless; steroid-binding activity is expressed only in the dimeric state. Finally, formation of the hybrid indicates that SBP dimerization represents a conserved event during the molecular ***evolution*** of SBP, suggesting that the structural elements responsible lot dimerization will be homologous in SBPs from other ***species*** .

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 NEWS  7  Apr 22   BIOSIS Gene Names now available in TOXCENTER
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 NEWS  9  Jun 03   New e-mail delivery for search results now available
 NEWS 10  Jun 10   MEDLINE Reload
 NEWS 11  Jun 10   PCTFULL has been reloaded
 NEWS 12  Jul 02   FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22   USAN to be reloaded July 28, 2002;
                   saved answer sets no longer valid
 NEWS 14  Jul 29   Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30   NETFIRST to be removed from STN
 NEWS 16  Aug 08   CANCERLIT reload
 NEWS 17  Aug 08   PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08   NTIS has been reloaded and enhanced
 NEWS 19  Aug 09   JAPIO to be reloaded August 18, 2002

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L2 8 L1 AND PLANT?

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L3 ANSWER 1 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AN 2001:339137 BIOSIS
DN PREV200100339137
TI Leucine and its keto acid enhance the coordinated expression of genes for branched-chain amino acid catabolism in Arabidopsis under sugar starvation.
AU Fujiki, Yuki (1); Ito, Masaki; Nishida, Ikuo; Watanabe, Akira
CS (1) Pflanzenphysiologie, ZMBP, Universitaet Tuebingen, Auf der Morgenstelle 1, D-72076, Tuebingen: yuki.fujiki@zmbp.uni-tuebingen.de, masakito@biol.s.u-tokyo.ac.jp, nishida@biol.s.u-tokyo.ac.jp Germany
SO FEBS Letters, (15 June, 2001) Vol. 499, No. 1-2, pp. 161-165. print.
ISSN: 0014-5793.
DT Article
LA English
SL English

L3 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 2000:360226 BIOSIS
DN PREV200000360226
TI Isolation and characterization of cDNA clones for the E1beta and E2 subunits of the branched-chain alpha-ketoacid dehydrogenase complex in Arabidopsis.
AU Fujiki, Yuki; Sato, Tokuyuki; Ito, Masaki; Watanabe, Akira (1)
CS (1) Department of Biological Sciences, Graduate School of Science, University of Tokyo, Hongo, Bunkyo-ku, Tokyo, 113-0033 Japan
SO Journal of Biological Chemistry, (February 25, 2000) Vol. 275, No. 8, pp. 6007-6013. print.
ISSN: 0021-9258.
DT Article
LA English
SL English

L3 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS

AN 1999:643157 CAPLUS
DN 132:219453
TI Gene Expression of ***plants*** at night
AU Fujiki, Yuki; Watanabe, Akira
CS Graduate School of Science, The University of Tokyo, Japan
SO Shokubutsu Saibo Kogaku Shirizu (1999), 11(Shokubutsu no Kankyo Oto), 129-132
CODEN: SSKSFR
PB Shujunsha
DT Journal; General Review
LA Japanese

L3 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1996:71379 BIOSIS
DN PREV199698643514
TI Roles of amino acid residues surrounding phosphorylation site 1 of branched-chain alpha-ketoacid dehydrogenase (***BCKDH***) in catalysis and phosphorylation site recognition by ***BCKDH*** kinase.
AU Hawes, John W.; Schnepf, R. Jason; Jenkins, Anne E.; Shimomura, Yoshiharu; Popov, Kirill M.; Harris, Robert A. (1)
CS (1) Dep. Biochem. Mol. Biol., Indiana Univ. Sch. Medicine, 635 Barnhill Drive, Indianapolis, IN 46202-5122 USA
SO Journal of Biological Chemistry, (1995) Vol. 270, No. 52, pp. 31071-31076.
ISSN: 0021-9258.
DT Article
LA English

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L4 0 L1 AND TRANSFORM?

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PROCESSING COMPLETED FOR L5
L6 3 DUPLICATE REMOVE L5 (4 DUPLICATES REMOVED)

=> d l6 1-3

L6 ANSWER 1 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AN 2000:340638 BIOSIS
DN PREV200000340638
TI Effect of oral glucose on leucine turnover in human subjects at rest and during exercise at two levels of dietary protein.
AU Bowtell, J. L. (1); Leese, G. P.; Smith, K.; Watt, P. W.; Nevill, A.; Rooyackers, O.; Wagenmakers, A. J. M.; Rennie, M. J.
CS (1) Sport and Exercise Science Research Centre, South Bank University, 103 Borough Road, London, SE1 0AA UK
SO Journal of Physiology (Cambridge), (May 15th, 2000) Vol. 525, No. 1, pp. 271-281. print.
ISSN: 0022-3751.
DT Article
LA English

SL English

L6 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 1999:12396 BIOSIS
DN PREV199900012396
TI Modulation of whole body protein metabolism, during and after exercise, by variation of dietary protein.
AU Bowtell, J. L. (1); Leese, G. P. (1); Smith, K. (1); Watt, P. W. (1); Nevill, A.; Rooyackers, O.; Wagenmakers, A. J. M.; Rennie, M. J. (1)
CS (1) Dep. Anat. Physiol., Small's Wynd, Univ. Dundee, Dundee DD1 4HN UK
SO Journal of Applied Physiology, (Nov., 1998) Vol. 85, No. 5, pp. 1744-1752. ISSN: 8750-7587.
DT Article
LA English

L6 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1995:282022 BIOSIS
DN PREV199598296322
TI PBC-like lesion is induced by immunization with recombinant PDC-E2 ***BCOADH*** -E2 hybrid molecule and lipopolysaccharide injection in neonatally thymectomized mice.
AU Masanga, T.; Watanabe, Y.; Leung, P. S. C.; Kamiyasu, M.; Sanada, E.; Nakanishi, T.; Kajiyama, G.; Gershwin, M. E.
CS First Dep. Intern. Med., Hiroshima Univ. Sch. Med., Intern. Med., Univ. California Davis, Davis, CA USA
SO Gastroenterology, (1995) Vol. 108, No. 4 SUPPL., pp. A1119.
Meeting Info.: 95th Annual Meeting of the American Gastroenterological Association and Digestive Disease Week San Diego, California, USA May 14-17, 1995
ISSN: 0016-5085.
DT Conference
LA English

=> s oxoacid(w)dehydrogenase(w)complex and plant?
L7 1 OXOACID(W) DEHYDROGENASE(W) COMPLEX AND PLANT?

=> d l7 1

L7 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
AN 1999:35006 CAPLUS
DN 130:106028
TI Use of DNA encoding plastid pyruvate dehydrogenase and branched chain oxoacid dehydrogenase components to enhance polyhydroxyalkanoate biosynthesis in ***plants***
IN Randall, Douglas R.; Johnston, Mark L.; Miernyk, Jan A.; Luethy, Michael H.; Mooney, Brian P.
PA University of Missouri, USA
SO PCT Int. Appl., 151 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9900505	A1	19990107	WO 1998-US13406	19980630

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,

DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, ML, MR, NE, SN, TD, TG

	AU 9884731	A1	19990119	AU 1998-84731	19980630
	US 6143561	A	20001107	US 1998-108020	19980630
PRAI	US 1997-51291P	P	19970630		
	US 1997-55255P	P	19970801		
	US 1998-76544P	P	19980302		
	US 1998-76554P	P	19980302		
	WO 1998-US13406	W	19980630		

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s oxoacid(w)dehydrogenase and plant?
L8 9 OXOACID(W) DEHYDROGENASE AND PLANT?

=> duplicate remove l8
DUPLICATE PREFERENCE IS 'BIOSIS, EMBASE, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L8
L9 9 DUPLICATE REMOVE L8 (0 DUPLICATES REMOVED)

=> d l9 1-9

L9 ANSWER 1 OF 9 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2001214077 EMBASE
TI Leucine and its keto acid enhance the coordinated expression of genes for branched-chain amino acid catabolism in Arabidopsis under sugar starvation.
AU Fujiki Y.; Ito M.; Nishida I.; Watanabe A.
CS Y. Fujiki, Pflanzenphysiologie, ZMDP, Universitat Tubingen, Auf der Morgenstelle 1, D-72076 Tubingen, Germany. yuki.fujiki@zmbp.uni-tuebingen.de
SO FEBS Letters, (15 Jun 2001) 499/1-2 (161-165).
Refs: 26
ISSN: 0014-5793 CODEN: FEBLAL
PUI S 0014-5793(01)02536-4
CY Netherlands
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L9 ANSWER 2 OF 9 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2000078300 EMBASE
TI Isolation and characterization of cDNA clones for the E1.beta. and E2 subunits of the branched-chain .alpha.-ketoacid dehydrogenase complex in Arabidopsis.
AU Fujiki Y.; Sato T.; Ito M.; Watanabe A.
CS A. Watanabe, Department of Biological Sciences, Graduate School of Science, University of Tokyo, Hongo, Bunkyo-ku, Tokyo 113-0033, Japan. watanabe@biol.s.u-tokyo.ac.jp

SO Journal of Biological Chemistry, (2000) 275/8 (6007-6013).
Refs: 57
ISSN: 0021-9258 CODEN: JBCHA3
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L9 ANSWER 3 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:266157 BIOSIS
DN PREV200000266157
TI Interaction between the lipoamide-containing H-protein and the lipoamide dehydrogenase (L-protein) of the glycine decarboxylase multienzyme system: 1. Biochemical studies.
AU Neuburger, Michel; Polidori, Ange M.; Pietre, Emmanuel; Faure, Magali; Jourdain, Agnes; Bourguignon, Jacques; Pucci, Bernard; Douce, Roland (1)
CS (1) DBMS/Laboratoire de Physiologie Cellulaire Vegetale, CEA-Grenoble, 17 Rue des Martyrs, 38054, Grenoble Cedex 9 France
SO European Journal of Biochemistry, (May, 2000) Vol. 267, No. 10, pp. 2882-2889. print..
ISSN: 0014-2956.
DT Article
LA English
SL English

L9 ANSWER 4 OF 9 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2000273457 EMBASE
TI The dihydrolipoyl acyltransferase (BCE2) subunit of the ***plant*** branched- chain .alpha.-ketoacid dehydrogenase complex forms a 24-mer core with octagonal symmetry.
AU Mooney B.P.; Henzl M.T.; Miernyk J.A.; Randall D.D.
CS D.D. Randall, University of Missouri, Department of Biochemistry, 117 Schweitzer Hall, Columbia, MO 65211, United States. randalld@missouri.edu
SO Protein Science, (2000) 9/7 (1334-1339).
Refs: 30
ISSN: 0961-8368 CODEN: PRCIEI
CY United States
DT Journal; Article
FS 029 Clinical Biochemistry
LA English
SL English

L9 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2002 ACS
AN 1999:35006 CAPLUS
DN 130:106028
TI Use of DNA encoding plastid pyruvate dehydrogenase and branched chain ***oxoacid*** ***dehydrogenase*** components to enhance polyhydroxyalkanoate biosynthesis in ***plants***
IN Randall, Douglas R.; Johnston, Mark L.; Miernyk, Jan A.; Luethy, Michael H.; Mooney, Brian P.
PA University of Missouri, USA
SO PCT Int. Appl., 151 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9900505	A1	19990107	WO 1998-US13406	19980630
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9884731	A1	19990119	AU 1998-84731	19980630
	US 6143561	A	20001107	US 1998-108020	19980630
PRAI	US 1997-51291P	P	19970630		
	US 1997-55255P	P	19970801		
	US 1998-76544P	P	19980302		
	US 1998-76554P	P	19980302		
	WO 1998-US13406	W	19980630		

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1995:415946 BIOSIS
DN PREV199598430246
TI Genetics of the synthesis of serine from glycine and the utilization of glycine as sole nitrogen source by Saccharomyces cerevisiae.
AU Sinclair, David A. (1); Dawes, Ian W.
CS (1) Sch. Biochem. Molecular Genetics, Univ. New South Wales, NSW 2052 Australia
SO Genetics, (1995) Vol. 140, No. 4, pp. 1213-1222.
ISSN: 0016-6731.
DT Article
LA English

L9 ANSWER 7 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:242917 BIOSIS
DN PREV199344116117
TI Dihydrolipoamide dehydrogenase in ***plants*** : Differences in the mitochondrial and chloroplastic forms.
AU Taylor, Anne E. (1); Millar, Ruth E.; Carmichael, Alisa (1); Cogdell, Richard J. (1); Lindsay, J. Gordon
CS (1) Dep. Botany, Univ. Glasgow, Glasgow G12 8QQ UK
SO Biochemical Society Transactions, (1993) Vol. 21, No. 1, pp. 38S.
Meeting Info.: 644th Meeting of the Biochemical Society Glasgow, Scotland, UK September 16-18, 1992
ISSN: 0300-5127.
DT Article
LA English

L9 ANSWER 8 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:32873 BIOSIS
DN PREV199395021073
TI The catabolism of branched-chain amino acids occurs via 2- ***oxoacid*** ***dehydrogenase*** in Saccharomyces cerevisiae.
AU Dickinson, J. Richard (1); Dawes, Ian W.
CS (1) Sch. Pure Applied Biol., University Wales College Cardiff, PO Box 915, Cardiff CF1 3TL

SO Journal of General Microbiology, (1992) Vol. 138, No. 10, pp. 2029-2033.
ISSN: 0022-1287.
DT Article
LA English

L9 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2002 ACS
AN 1975:425137 CAPLUS
DN 83:25137
TI Biosynthesis of cutin. Enzymic conversion of .omega.-hydroxy fatty acids to dicarboxylic acids by cell-free extracts of Vicia faba epidermis
AU Kolattukudy, P. E.; Croteau, Rodney; Walton, T. J.
CS Dep. Agric. Chem., Washington State Univ., Pullman, Wash., USA
SO Plant Physiol. (1975), 55(5), 875-80
CODEN: PLPHAY
DT Journal
LA English

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.18	55.39

FILE 'STNGUIDE' ENTERED AT 18:00:41 ON 14 AUG 2002
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L9 ANSWER 7 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

=>

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=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.06	58.03

STN INTERNATIONAL LOGOFF AT 18:03:33 ON 14 AUG 2002